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ABSTRACT

This manual addresses the specific needs of Spartanburg Technical College (South Carolina) in evaluating student outcomes of program competencies. The guidelines provide a step-by-step method for faculty to evaluate the objectives by which they teach and the assessment methods they use to measure students' achievement of those objectives. A four-part evaluation process is outlined: (1) analyze course competencies and objectives to determine their domain (cognitive, psychomotor, affective) and level (knowledge, application, problem solving); (2) analyze the assessment methods used, in order to test those competencies and objectives in the same domains and levels of the assessment instrument; (3) compare the levels of the domains found in the course objectives with the levels of the domains found in the assessment instruments; (4) change those assessment instruments that do not match the levels of the course objectives or create new assessment instruments. Appendices make up 90% of the manual and include an assessment evaluation chart, Spartanburg Technical College's taxonomy of educational domains, key to assessment types, descriptions of assessment methods, and information on field testing outcomes assessments. Contains a glossary. (GLR)

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GUIDELINES FOR IMPLEMENTATION OF OUTCOMES ASSESSMENT

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1991

FOREWORD

Numerous faculty and staff have devoted much time and dedication to the development and implementation of the outcomes assessment process at Spartanburg Technical College. Several Outcomes Assessment Advisory Committee members have been involved from the beginning through the final stages. Others were involved in the later developmental stages.

During the developmental stages, the committee's basic philosophy was to adopt procedures that would be nonthreatening and practical to implement as well as respectful of the professionalism and uniqueness of the faculty and programs. Thus the committee remained sensitive to the needs and responses of faculty, understanding that the procedures could be changed and adapted as needed.

The components of the process, which were introduced in linear stages, eventually began to merge to accomplish the overall goal of the outcomes assessment process.

The names of the members of the Outcomes Assessment Advisory Committee that contributed to the development of the outcomes assessment process at Spartanburg Technical College are listed below.

Sherry Burns
Barbara Cobb
Steve Faulkner
Bob Isenhower
Karen Link
Melinda Sullivan
Ed Vitale
Debbie Burton
Dianne Cornett
Sheila Garrett
Debra Kay
Karen Ravan
Ron Towery

OUTCOMES ASSESSMENT

GOAL

THE GOAL FOR THE OUTCOMES ASSESSMENT PROCESS AT SPARTANBURG TECHNICAL COLLEGE IS TO ASSIST THE INSTRUCTOR IN EXAMINING COURSE COMPETENCIES, EDUCATIONAL DOMAINS, ASSESSMENT METHODS, AND TEACHING METHODS IN ORDER TO IMPROVE STUDENT LEARNING.

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GUIDELINES FOR IMPLEMENTATION OF OUTCOMES ASSESSMENT AT SPARTANBURG TECHNICAL COLLEGE

INTRODUCTION

In 1988 the Outcomes Assessment Advisory Committee developed an implementation strategy for outcomes assessment at Spartanburg Technical College. The President and Vice President of Academic Affairs approved the proposal, titled "Outcomes Assessment at Spartanburg Technical College." The Committee was then charged with developing guidelines to be used by faculty to implement outcomes assessment.

The Committee developed a manual entitled Guidelines for Implementation of Outcomes Assessment at Spartanburg Technical College. The guidelines addressed the specific needs of Spartanburg Technical College to evaluate student outcomes of program competencies which were derived from the DACUM process. Program competencies were incorporated into courses detailed in course guides. The guidelines were developed to use in conjunction with the course guides to ensure complete assessment of all program competencies.

The guidelines provide a step-by-step method for faculty to evaluate the objectives by which they teach and the assessment methods they use to measure students' achievement of those objectives. The guidelines include a simple "how to" approach to help faculty revise current assessment methods and create new ones. Finally, the guidelines emphasize the need for faculty to evaluate their objectives and assessment methods to ensure the incorporation of higher order thinking skills.

The guidelines are designed to detail Section III in the initial proposal, "Outcomes Assessment at Spartanburg Technical College." In Section III, the Committee outlined the following procedures for implementing outcomes assessment:

(A) Select methods of measurement
(B) Determine the validity and reliability of methods and instruments
(C) Collect, analyze, and interpret results of student outcomes
(D) Develop a plan of action

The guidelines manual covers the process identified in the proposal by which faculty (A) Select methods of measurement, the "validity" portion of (B) Determine the validity and reliability of methods and instruments, and (D) Develop a plan of action.

The Committee determined that the information necessary to create guidelines for the "reliability" portion of (B) and all of (C) Collect, analyze, and interpret results of student outcomes could best be obtained through the evaluation, development, and field testing of outcomes assessment methods.

The procedure for field testing individual courses, finalized in fall, 1989, requires faculty to complete the Outcomes Assessment Field Test Form and the Field Testing Summary and Action Plan (Appendix G).

The final step in the process, completed in 1990, involves the field testing of teaching strategies. The procedure and form for the documentation of the field testing of teaching strategies include both student and peer feedback (Appendix H).

GUIDELINES FOR EVALUATING OBJECTIVES AND ASSESSMENT METHODS

These guidelines will enable instructors to evaluate whether they are assessing the students on the level that the competencies and objectives of the course guide indicate they should.

The evaluation entails a four-part process:

PART ONE involves an analysis of competencies and objectives in the course guide to determine the domains (cognitive, psychomotor, affective) and levels (knowledge, application, problem solving) for each competency and objective.

PART TWO involves an analysis of the assessment methods used to test those competencies and objectives to determine the domains (cognitive, psychomotor, affective) and levels (knowledge, application, problem solving) of the assessment instrument.

PART THREE involves a comparison of the levels of the domains found in the objectives of the course guide with the levels of the domains found in the assessment instruments.

PART FOUR involves changing the assessment instruments that do not match to the levels of the course objectives or creating new assessment instruments.

To complete Parts One through Four of the process, instructors will need:
(1) a copy of the course guide for the course (Appendix I - STC format);
(2) a copy of the Assessment Evaluation Chart for each competency in the course guide (Instructors will need to duplicate copies of the chart attached as Appendix A);
(3) copies of all assessment instruments and methods (tests, projects, lab assignments, etc.) used in the course.

PART ONE: ANALYZE THE COURSE GUIDE FOR DOMAINS AND LEVELS OF DOMAINS OF THE OBJECTIVES

STEP 1: Write the name of the course being analyzed and the date on the top of each Assessment Evaluation Chart.

STEP 2: Write the first competency in the box labeled "COMPETENCY" and each of the objectives for that competency on a separate line in column one.

STEP 3: Using Spartanburg Technical College's Taxonomy of Educational Domains (attached as Appendix B) and/or the Assessment Method Decision Tree (attached as Appendix D), determine the domain and the level of the domain of the first objective in Column 1. Place a check mark in the appropriate column (2, 3, 4, 5, 6, or 7) which signifies the level of the domain for the particular objective. (If there is more than one level of a domain for a particular objective, place a check mark in all applicable levels.)

STEP 4: Repeat Step 3 for each objective listed in Column 1 of the chart.

STEP 5: Repeat Steps 2 through 4 for each competency in the course guide.

PART TWO: ANALYZE THE ASSESSMENT INSTRUMENTS FOR DOMAIN AND LEVELS OF DOMAINS

STEP 1: Locate the assessment instruments for the first objective of the first competency listed in Column 1 of the chart. Using the list of assessment methods (for example, multiple choice, essay, project, etc., found in Appendix C), place the appropriate initials in Column 8 "ASSESSMENT TYPE" on the Assessment Evaluation Chart that signifies the kind of test or assessment being given. (Indicating the source of the assessment item or test question for easy reference is helpful in later steps.)

STEP 2: Using Spartanburg Technical College's Taxonomy of Educational Domains (Appendix B) and/or the Assessment Method Decision Tree (Appendix D), determine the domain and the level of the domain of the test or assessment items listed in Column 8. Place a check mark in the appropriate column (9, 10, 11, 12, 13, or 14) which signifies the level of the domain for that particular test or assessment method. (If there is more than one level of a domain for a particular test item, place a check mark in all applicable levels.)

STEP 3: Repeat Steps 1 and 2 for each objective listed in Column 1.

STEP 4: Repeat Steps 1, 2, and 3 for each competency in the course guide.

PART THREE: COMPARE THE RESULTS

For each objective, compare the levels of the domains in the course guide (columns 2 through 7) with the levels of the domains in the assessment instruments (columns 9 through 14). The following are the two conditions under which revisions will be necessary:

Condition One: If there is (a) an inconsistency in the levels of the domains between the objectives in the course guide and the levels of the domains in the assessment method or (b) no assessment method for the objective, then the assessment method should be revised or created to match the level of the objectives.

Condition Two: If it is determined that the objectives are predominantly on the knowledge level of the cognitive domain, the objectives and the assessment methods should be revised to incorporate more of the higher order levels of application and problem solving. (Note: After careful study of program competencies, faculty teaching an entry-level course may determine that the objectives need to be predominantly on the knowledge level, and revision may not be necessary.)

The process to make the changes required by these conditions is described in PART FOUR.

PART FOUR: REVISE/CREATE ASSESSMENT METHODS AND OBJECTIVES

Condition One: The first situation or condition that would require a revision is an inconsistency between the levels of the objectives and the levels of the assessment instruments, or the absence of an assessment for a particular objective. Under these conditions, change the assessment instrument in the following manner:

STEP 1: Using the Assessment Method Decision Tree (Appendix D) and the Selection of Assessment Method Table (Appendix E) choose the appropriate type of assessment method for the domain and level of the objectives in which an inconsistency is found.

STEP 2: Using the Descriptions of Assessment Methods (Appendix F), locate the description for the chosen method and construct the assessment method.

STEP 3: Incorporate the assessment method into the course's assessment instruments and reflect the change on the "Assessment Evaluation Chart."

Condition Two: The second situation or condition that would require a revision is an awareness that the course objectives are predominantly on the knowledge level of the cognitive domain. (See note under Condition Two above.) Under these circumstances, change the course objectives and the assessment methods in the following manner:

STEP 1: Determine the level to which this objective should be changed. Using Appendix B, rewrite the objective to reflect the higher order level of the cognitive domain. Incorporate changed objective into the course guide and on the "Assessment Evaluation Chart" on the side labeled Course Guide.

STEP 2: Following the steps in Condition One of this part, select a method and create an assessment instrument for the newly revised objective. Incorporate the changed assessment method on the Assessment Evaluation Chart on the side labeled Assessment Method.

APPENDIX A

ASSESSMENT EVALUATION CHART

ASSESSMENT EVALUATION CHART

INSTRUCTOR NAME:

COURSE:

DEAN SIGNATURE:

DATE SUBMITTED:

COURSE GUIDE							ASSESSMENT METHOD						
COMPETENCY:	Cognitive			Psychomotor		Affective	ASSESSMENT TYPE	Cognitive			Psychomotor		Affective
	KNOW	APPL	PRBS	APPL	PRBS	APPL		KNOW	APPL	PRBS	APPL	PRBS	APPL
OBJECTIVES													

APPENDIX B

SPARTANBURG TECHNICAL COLLEGE'S TAXONOMY OF EDUCATIONAL DOMAINS

Explanation

When the Outcomes Assessment Advisory Committee submitted the document entitled "Outcomes Assessment at Spartanburg Technical College" in 1988, it made reference to Benjamin Bloom's six levels of the cognitive domain -- knowledge, comprehension, application, analysis, synthesis, and evaluation.

Upon further study, the Outcomes Assessment Advisory Committee determined that Bloom's Taxonomy was unnecessarily complicated and complex for Spartanburg Technical College's purposes. The Committee therefore developed the Spartanburg Technical College Taxonomy of Educational Domains. The Spartanburg Technical College Taxonomy lists only three distinct levels of the cognitive domain -- knowledge, application, and problem solving -- as being the most practical and effective to be used to evaluate student outcomes.

Note: STC Taxonomy's knowledge level includes Bloom's knowledge and comprehension levels, and the application level is identical to Bloom's. The problem solving level, however, is equivalent to the three Bloom's levels: analysis, synthesis, and evaluation.

The Outcomes Assessment Advisory Committee considered the differences between the knowledge level in the psychomotor domain with the knowledge level in the cognitive domain. The Committee concluded that psychomotor skills involve a certain amount of knowledge and that testing a psychomotor skill might be assessing both domains. The Committee decided that any psychomotor assessment should concentrate on the psychomotor skill only. The knowledge underlying that skill can be assessed as part of the cognitive domain. Therefore the Committee has only two levels in this domain -- application and problem solving -- to be used to evaluate student outcomes.

The Outcomes Assessment Advisory Committee recognized that almost every DACUM chart lists characteristics of the affective domain needed by entry level workers. The Committee determined that the only level that can be effectively and meaningfully measured in the educational setting is the application level. Thus, it is the only level of the affective domain listed in this Taxonomy.

SPARTANBURG TECHNICAL COLLEGE, SPARTANBURG, SOUTH CAROLINA

Appendix B

Appendix B Contains:

1. Definitions of each of the domains.
2. Definitions of each level of each domain.
3. Examples of objectives/assessment items for each domain level.
4. A list of the verbs most commonly used to signify objectives/assessment items for each domain level.

The Appendix is intended as a guide for analyzing and determining the domain and levels of the course guide objectives and the assessment methods. The Assessment Method Decision Tree (Appendix D) incorporates all the concepts of the STC Taxonomy and verbs for easy reference into a short and graphic version.

Appendix B

SPARTANBURG TECHNICAL COLLEGE'S
TAXONOMY OF EDUCATIONAL DOMAINS

I. COGNITIVE DOMAIN

The cognitive domain deals with the mental processing of information from the simple level of recalling and comprehension to the complex level of problem solving. Development of intellectual abilities and skills is evaluated in outcomes assessment.

The cognitive domain has three general levels - knowledge, application, and problem solving.

A. KNOWLEDGE - This level includes the recalling of previously learned information as well as the ability to comprehend the meaning of this information.

The most commonly used verbs for this level are:

repeat	associate	define
summarize	explain	recognize
restate	tell	indicate
list	review	name
describe	show	identify
state	paraphrase	

EXAMPLES of objectives/assessment items for each division are:

Arts and Sciences

Explain the purpose of each of the basic components of a speech.

Business

List the three components of the Central Processing Unit.

Engineering Technology

List the parts of a transit.

Health Sciences

Define blood pressure.

Industrial

Identify the features of a non-contact sensor.

Appendix B

B. **APPLICATION** - This level includes the ability to use learned information in new and concrete situations. The information may be in the form of ideas, concepts, principles, or theories which must be applied.

The most commonly used verbs for this level are:

record	employ
estimate	solve
compare	classify
contrast	choose
prescribe	apply
calculate	demonstrate
differentiate	distinguish

EXAMPLES of objectives/assessment items for each division are:

Arts and Sciences

Develop a speech outline that includes the basic components of a speech.

Business

Draw a flow chart to show multiple control breaks.

Engineering Technology

Given the interaction between the dimensions and the area of the lot, calculate the dimensions of a rectangular lot.

Health Sciences

Given a list of random blood pressures, differentiate between normal and abnormal.

Industrial

Classify a robot system's sensors by their construction and application.

Appendix B

C. **PROBLEM SOLVING** - This level includes the ability to do any of the following: Break down information into its component parts, put these parts together to form a new meaning, or evaluate the meaning for a given purpose.

The most commonly used verbs for this level are:

analyze	debate
appraise	invent
advocate	create
challenge	plan
confront	assess
evaluate	judge
defend	propose
breakdown	

EXAMPLES of objectives/assessment items for each division are:

Arts and Sciences

Given a business communication situation, determine the appropriate type of oral presentation and develop a speech for the occasion.

Business

Given input and output specifications, write a COBOL program to update a file.

Engineering Technology

Analyze a set of procedures for conducting a concrete compression test.

Health Sciences

Evaluate a patient's blood pressure to determine if it falls in the low, normal, or high ranges.

Industrial

Evaluate an assembly process and recommend the type of sensors needed for information development.

Appendix B

II. PSYCHOMOTOR DOMAIN

The psychomotor domain is the combination of mental and physical

The psychomotor domain is the combination of mental and physical activities involved in a required task.

A task such as driving a nail into a board is an example of a simple psychomotor task. It might include the best way to hold a nail to prevent injury and the most efficient technique for driving the nail in straight. But the task is primarily a physical one that requires the mind in guiding the learner's motion.

Fine-tuning a carburetor is a complex psychomotor task. It involves more coordination between the mind and the body. The mind guides the physical movement while making decisions as to how much adjustment is needed and when to stop. This requires knowledge of how the carburetor works, the effect of carburetor adjustment on engine performance, and other details. The physical activity and muscular controls are only one aspect of learning this task. The other aspects are knowledge based and are evaluated using the cognitive domain. Therefore, students' outcomes can be evaluated on two levels in the psychomotor domain: application and problem solving.

A. APPLICATION - The application level involves practicing and imitating the skill or task. It may involve exploring the various ways to perform the skill or task.

The most commonly used verbs for this level are:

imitate	employ
record	locate
operate	set up
perform	draw
practice	sketch
measure	trace
dramatize	use
illustrate	demonstrate

APPENDIX B

EXAMPLES of objectives/assessment items for each division are:

Arts and Science

Demonstrate the effective use of a visual aid during a speech.

Business

Perform a complete disk backup for a computer system.

Engineering Technology

Set up a transit.

Health Sciences

Using a sphygmomanometer and stethoscope, measure a patient's blood pressure within +/- two degrees of accuracy.

Industrial

Record the voltage output of a thermocouple type sensor.

B. **PROBLEM SOLVING** - The highest level is problem solving. Problem solving involves a student's ability to adapt a skill to various tasks and situations. In addition, developing new ways to perform skills or tasks are evaluated at this level.

The most commonly used verbs for this level are:

perfect	design
master	experiment

Appendix B

EXAMPLES of objectives/assessment items for each division are:

Arts and Sciences

Given a business communication situation, design and use effective visual aids during an oral presentation.

Business

Given a system backup, restore lost files.

Engineering Technology

Design a concrete bridge for an interstate highway.

Health Science

Develop and implement a nursing care plan for a patient diagnosed with hypertension.

Industrial

Develop and implement a preventive maintenance inspection interval plan.

III. AFFECTIVE DOMAIN

The affective domain deals with students' values, feelings, and attitudes towards school/work. All instructors at Spartanburg Technical College are aware of the importance of interest, motivation, and attitude of students in class and on the job. This domain has only one level, the application level, on which student outcomes at Spartanburg Technical College will be measured. The knowledge level of the affective domain is so closely connected with the knowledge level of the cognitive domain that the knowledge level of the affective domain will not be measured. The problem solving level will be measured on the job, not in the academic setting.

Appendix B

APPLICATION - At this level students demonstrate behaviors that reflect a belief or attitude. That is, a student will appear to hold a value from task to task. In other words, the student is not only attending to or interested in something, he now accepts it, rejects it, defends it, or confronts it.

The most commonly used verbs for this level are:

value	advocate
believe	criticize
persuade	approve
defend	demonstrate (values)
	confront

EXAMPLES of objectives/assessment items for each division are:

Arts and Sciences

Evaluate the organizational and presentation skills of speakers.

Business

Identify positive and negative practices in sales using case studies.

Engineering

Evaluate the safety procedures that were observed on a construction site.

Health Sciences

Defend positive practices involved in patient teaching regarding life style changes made by the hypertension patient.

Industrial

Observe a video tape of a robot repair and evaluate the technician's organization and reaction under stress.

APPENDIX C

ASSESSMENT TYPES

KEY:

TF	true/false
M	matching
MC	multiple choice
SA	short answer
E	essay
CS	case study
P	project
OP	oral presentation
RP	role play
S	simulation
BE	board exam
PC	performance checklist
RC	rater calibrated instrument
GD	group discussion
OB	observation/questioning

APPENDIX D

ASSESSMENT METHOD DECISION TREE

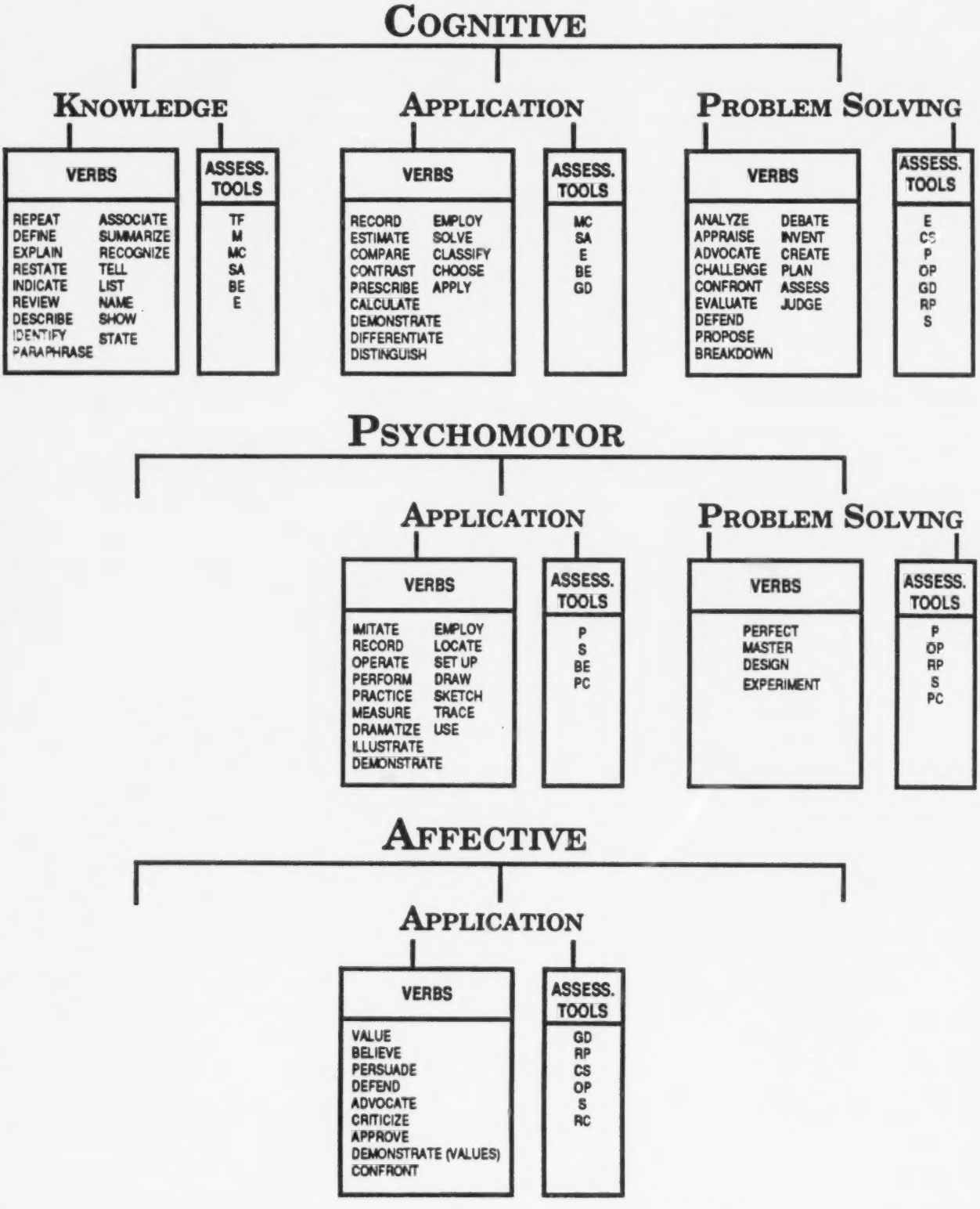
The Assessment Method Decision Tree can be used to complete Parts One through Four of the guidelines. That is, it can aid instructors (1) in evaluating the course guide objectives; (2) in evaluating the assessment methods; (3) in completing the Assessment Evaluation Chart; and (4) in comparing instruction to assessment methods once the Assessment Evaluation Chart is completed.

The chart should assist instructors in the creation and revision of assessment methods. In addition, the chart serves as a guideline to move objectives and assessment methods to higher levels.

The verbs and assessment methods are only suggestions for each level. There will be cases in which a verb or method may work with a different domain or level as well. The decision tree is meant to offer a guide to help instructors make the decisions related to assessment methods.

SPARTANBURG TECHNICAL COLLEGE, SPARTANBURG, SOUTH CAROLINA.

ASSESSMENT METHOD DECISION TREE



APPENDIX E

RECOMMENDED SELECTION OF ASSESSMENT METHODS

	T/F	M	MC	SA	E	CS	P	OP	RP	S	BE	PC	RC	GD
COGNITIVE DOMAIN:														
Knowledge	+	+	+	+	+	-	-	*	-	-	+	-	-	-
Application	*	*	+	+	+	-	-	*	-	-	+	-	-	+
Problem Solving	-	-	-	*	+	+	+	+	+	+	o	-	-	+
PSYCHOMOTOR DOMAIN:														
Application	-	-	-	-	-	-	+	*	-	+	+	+	-	-
Problem Solving	-	-	-	-	-	-	+	+	+	+	o	+	-	-
AFFECTIVE DOMAIN:														
Application	-	-	-	-	-	x	+	x	+	x	o	x	+	+

KEY:

- \+ effective assessment method
- \- ineffective assessment
- * may be effective if items are carefully constructed
- o may be effective if boards include sections to assess problem solving
- x effective assessment method if done in conjunction with rater calibrated instrument

TF true/false
M matching
MC multiple choice
SA short answer
E essay
CS case study
P project
OP oral presentation
RP role play
S simulation
BE board exam (state or national)
PC performance checklist
RC rater calibrated instrument
GD group discussion
OB observation/questioning

APPENDIX F

DESCRIPTIONS OF ASSESSMENT METHODS

TRUE-FALSE ITEMS: A simple statement to which students may agree or disagree.

Advantages:	Disadvantages:
- can sample much content rapidly	- very difficult to write
- quick and reliable to score	- often measures trivia
- particularly effective in assessing student's knowledge of facts	- 50/50 chance for students who guess

Guidelines:

- Determine competency/objective to be measured.
- Use only when true-false distinction is as obvious as difference in black vs. white.
- Eliminate NEVER, ALWAYS, and GENERALLY.
- Rephrase content.
- State material positively.
- Create approximately equal numbers of true or false.
- Create no answer pattern.

APPENDIX F

MATCHING ITEMS: Two lists in which an item from one list is related to an item from the other list.

Advantages:

- can measure large volume of content
- quick to score
- useful for drawings or illustrations
- can be written to reduce guessing

Disadvantages:

- difficult to write
- usually only measures students' ability to memorize facts

Guidelines:

- Determine competency/objective to be measured.
- Keep list to a maximum of 10 - 12 items.
- Construct lists of same items.
- Create label for each list.
- Arrange or sequence items.
- Include more items in one list than the other.
- Be brief.
- Make directions clear.

APPENDIX F

MULTIPLE CHOICE ITEMS: An incomplete statement or question (called a stem) plus a list of responses, usually one correct and several incorrect (called distracters). There are numerous variations of multiple-choice examinations.

Advantages:

- measure all cognitive levels
- less guessing than true/false
- quick and reliable to score

Disadvantages:

- developing distractors is difficult
- more time-consuming for students
- encourages guessing

Guidelines:

- Determine competency/objective to be measured.
- Limit stem to one (1) concept.
- Phrase stem positively.
- Underscore EXCEPTION.
- Construct grammatically consistent stem and answers.
- Create a single, best answer.
- Provide 4 or 5 alternatives.
- Use plausible distractors.
- Arrange choices in sequence.
- Create choices of similar word length.
- Design choices of similar specificity.
- Avoid "All/none of above."
- Eliminate answers with "always" or "never".
- Vary location of correct answer.

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APPENDIX F

SHORT ANSWER: A form that may include questions, incomplete sentences, definitions, or identification items.

Advantages:

- prevents guessing correct response
- most effective measuring knowing, recalling, recognizing, or identifying
- relatively easy to construct
- provides an extensive sample of factual information
- useful in mathematical problems

Disadvantages:

- stresses rote recall and memorizing
- may yield unexpected correct choices

Guidelines:

- Phrase item so that missing information occurs at end
- Use answer blanks of uniform length
- Indicate expected degree of accuracy if completion item tests math ability
- Determine competency/objective to be measured
- Limit to measurement of important terms, names, dates, and generalizations
- Omit only significant words in incomplete statement items
- Avoid grammatical clues that reveal the correct answer
- Avoid too many blanks in complete statements
- Test items should be explicit enough to evoke the correct type of response
- Limit the length of the responses to single words or short phrases
- Avoid verbatim quotes from the textbook

Hints for Grading:

- Prepare a scoring key which contains all acceptable answers

---

APPENDIX F

ESSAY: A written response in paragraph form to answer a question or address an issue.

Advantages:

- allows freedom of response
- requires students to use subject knowledge of higher levels
- provides opportunity to improve writing skills
- demands that students study concepts and processes
- easy to write
- assesses critical thinking

Disadvantages:

- time-consuming and difficult to score
- samples small quantity of content
- puts poor writer at a disadvantage
- encourages bluffing

Guidelines:

- Determine competency/objective to be measured.
- Write the questions to elicit the thinking process that will be measured.
- Include new (or reorganized) material.
- State the expected content of the answer.
- Write clearly.

Hints for Grading:

- Remove student name before scoring.
- Read a random sample before marking.
- Read all responses to each question before advancing.
- Evaluate responses on evidence presented.
- Compare responses to prepared model.
- Have all students answer the same questions.
- Reread questions.

APPENDIX F

CASE STUDY: A prepared situation to which students respond.

Advantages:

- allows freedom of response
- requires students to use higher level skills
- provides opportunity to improve writing or speaking skills
- demands that students study concepts and processes
- could allow students to develop group (team) skills
- assesses students' critical thinking skills

Disadvantages:

- time-consuming and difficult to score.
- encourages bluffing

Guidelines:

- Determine competency/objective to be measured.
- Develop a realistic situation.
- Cover only concepts explored in course.
- Outline the solution(s)/results expected.
- Develop clear instructions/questions.
- Set roles for working in groups.

Hints for Grading:

- Prepare checklists of solution/results expected.
- Decide range of acceptable response.
- Evaluate responses on evidence presented.
- Compare responses to prepared model.
- Have all students respond to the same information and questions.

APPENDIX F

PROJECT: A product-oriented assignment which students develop.

Advantages:

- incorporates many concepts/skills learned
- allows freedom of response
- requires student to use higher level skills
- could allow students to develop group (team) skills
- assesses students' critical thinking skills

Disadvantages:

- time-consuming and difficult to score
- all students could develop similar or the same project

Guidelines:

- Determine competency/objective to be measured.
- Develop project guidelines.
- Require students to produce a plan for approval.
- Outline the expected outcomes.
- Set reasonable deadlines.
- Be available to advise students.

Hints for Grading:

- Prepare checklist of results expected.
- Decide range of acceptable products.
- Be flexible enough to consider the needs of the individual student or group of students.
- Give student an opportunity to explain the project.

SPARTANBURG TECHNICAL COLLEGE, SPARTANBURG, SOUTH CAROLINA

APPENDIX F

ORAL PRESENTATION: A prepared or impromptu assignment presented orally before other members of the class.

Advantages:

- incorporates many concepts/skills learned
- allows freedom of response
- encourages students to be experts in area presented
- requires students to use higher level skills
- provides opportunity to improve speaking skills

Disadvantages:

- students are fearful of oral presentations
- time-consuming and difficult to score
- puts poor speakers at a disadvantage

Guidelines:

- Determine competency/objective to be measured.
- Select area to be covered by presentations.
- Have ideas for topics ready for students.
- Limit time of each presentation.
- Set reasonable deadline.
- Require students to select topic and information choice.
- Be available to advise students.

Hints for Grading:

- Prepare checklist of desired results.
- Evaluate students separately for content and presentation.
- Grade student on the checklist of desired results and not in comparison to others.

SPARTANBURG TECHNICAL COLLEGE, SPARTANBURG, SOUTH CAROLINA

APPENDIX F

ROLE PLAY: A prepared situation that calls for students to act out roles to incorporate concepts learned.

Advantages:

- allows freedom of response
- requires students to use higher level skills
- provides opportunity to improve speaking skills
- demands that students study concepts and processes
- could allow students to develop interpersonal relation skills
- assesses students' critical thinking skills

Disadvantages:

- time-consuming and difficult to score
- may cause some students to be anxious
- assesses small quantity of content
- puts poor speakers at a disadvantage

Guidelines:

- Determine competency/objective to be measured.
- Develop a realistic situation.
- Cover only concepts explored in course.
- Outline the solution(s)/results expected.
- Develop clear instructions.
- Set roles for students.
- Set reasonable time period for each role play.

Hints for Grading:

- Prepare checklists of solution/results expected.
- Decide range of acceptable response.
- Evaluate responses on evidence presented.
- Compare responses to prepared model.
- Have all students respond to the same information and directions.

APPENDIX F

SIMULATION: An exercise in which students attempt to model a real-life problem situation.

Advantages:	Disadvantages:
- requires active student participation	often highly detailed
- requires students to make decisions and react to the results of decisions	time-consuming and difficult to score
- creates a high level of student involvement	encourages guessing

Guidelines:

- determine objectives to be measured
- outline the desired results
- prepare clear instruction to include time, number of students, and type of evaluative method

Hints:

- evaluate only objectives that are to be measured
- predetermine the range of acceptable results
- follow up simulation with questions

SPARTANBURG TECHNICAL COLLEGE, SPARTANBURG, SOUTH CAROLINA

APPENDIX F

PERFORMANCE CHECKLIST: A task list of skills on which students are evaluated based on ability.

Advantages:

- breaks down tasks into skills
- documents skills the student needs to improve
- communicates expected proficiency to students

Disadvantages:

- time-consuming to develop and implement

Guidelines:

- Detail tasks to form checklist. (Perform task analysis)
- Sequence tasks on checklist.
- Develop a rating system.
- Share checklist with students.
- Decide how much discussion students can have during performance.

Hints for Grading:

- Make sure rating is consistent.
- Determine how rating system will convert to grade.
- Determine degree of competency for partial performance.

APPENDIX F

RATER CALIBRATED INSTRUMENT: A list of the behavior characteristics on which students are evaluated.

Advantages:

- breaks down characteristic into behaviors
- easy to use and grade
- documents characteristics which students need to improve
- communicates expected proficiency to students
- quick to use

Disadvantages:

- time-consuming to develop

Guidelines:

- List the desired characteristics students should demonstrate.
- Determine behaviors that students use to demonstrate the desired characteristics.
- Create a checklist of behaviors.
- Develop a rating system for each behavior.
- Share checklist with students.

Hints for Grading:

- Make sure rating is consistent.
- Involve all instructors who will be using the instrument in the development of the instrument. (This is very important to the reliability of the instrument.)
- Determine how rating system will convert to grade.
- Determine degree of competency for partial performance.

APPENDIX F

GROUP DISCUSSION: A discussion among students with the instructor on concepts or issues learned in the course.

Advantages:

- allows freedom of response
- requires students to use higher level skill
- provides opportunity to improve speaking skills
- demands that students study concepts and processes
- could allow students to develop group skills
- assesses students' critical thinking skills

Disadvantages:

- time-consuming and difficult to score
- puts shy students at a disadvantage
- assesses small quantity content
- encourages bluffing

Guidelines:

- Determining competency/objective to be measured.
- Cover only concepts explored in course.
- Outline the solutions(s)/results expected.
- Develop clear questions.
- Develop clear instructions.
- Set roles for working in groups (leader, recorder).
- Decide how class will divide into groups.

Hints for Grading:

- Prepare checklists of solution/results expected.
- Decide range of acceptable response.
- Evaluate responses on evidence presented.
- Compare responses to prepared model.
- Have all students respond to the same information and questions.
- Allow for creative responses.

APPENDIX G

FIELD TESTING OUTCOMES ASSESSMENT

APPENDIX G

INFORMATION SHEET ON OUTCOMES ASSESSMENT FIELD TESTING

Field Test The actual instruction of the course and outcomes assessment methods as identified on the Assessment Evaluation Chart.

Purpose of Field Test Assessment The purpose of analyzing the results of field testing a course and the outcomes assessment methods identified through the Assessment Evaluation Chart is to develop and implement an action plan to revise and/or improve

1. *Course competencies to reflect higher thinking/problem solving levels*
2. *Methods of outcomes assessment*
3. *Teaching strategies*
4. *Student performance and learning*

Outcomes Assessment Field Test Form The Field Test form is a chart to record the results of the instructor's analysis of field testing of the course and the outcomes assessment methods based on the Assessment Evaluation Chart. The purpose of the form is to provide a standard method of collecting data on actual student outcomes in order to improve the course competencies, assessment methods, teaching strategies, and student performance.

Field Test Assessment Analysis of the results of field testing of courses and outcomes assessment measures will consist of

1. *Review of course content by competency; validation by professional judgment of the instructor*
2. *Analysis of student outcomes on competencies (number and percent passing and not passing)*
3. *Analysis of assessment methods*
4. *Analysis of teaching strategies*
5. *Analysis of other factors to include equipment, placement test scores, advisory committee input, and preparation for certification examinations*
6. *(Optional) Analysis of individual test items by the instructor*

Summary and Action Plan

1. *Summarize the results of the field testing.*
2. *Develop a written action plan for the next time the course is taught that incorporates any changes in competencies, assessment methods, and/or teaching strategies. (Also consider the following: Could the information obtained from the field testing process help the instructor in setting personal objectives or in requesting assistance for professional growth?)*

INSTRUCTOR NAME:

COURSE:

OUTCOMES ASSESSMENT
FIELD TEST FORM

DATE SUBMITTED:

Competencies	Teaching Methods	No. Passing % Passing	No. Not Passing % Not Passing	Instructor Comments:

APPENDIX G

OUTCOMES ASSESSMENT FIELD TESTING
SUMMARY AND ACTION PLAN

Course Number: _____

Course Name: _____

Instructor Name: _____

Quarter Field Tested _____

Department Head _____
(signature/date)

Dean _____
(signature/date)

Summary:
(May be a single paragraph)

Action Plan:
(May be a single paragraph)

APPENDIX H

FIELD TESTING TEACHING STRATEGIES

APPENDIX H

PROCEDURES FOR FIELD TESTING TEACHING STRATEGIES

I. Planning

1. Identify course in which strategy will be used (competency, unit, etc.).
2. Identify objectives(s) (taken from course guide) that will be accomplished with strategy.
3. Identify proposed strategy in consultation with immediate supervisors. Deans may decide to approve all strategies prior to implementation (optional).
4. Develop a written plan for the implementation of the strategy. (In same course, in different course, in different groups)
5. Identify peer observer and discuss plan prior to field testing.

II. Evaluation

1. Implement strategy with peer observer present.
2. Discuss outcomes with peer observer and identify at least three key points from conversation.
3. Collect feedback on strategy from students (oral and/or written comments.)
4. Identify personal observations.

III. Summary

1. Workability of the strategy versus the theory
2. Student response
3. Usefulness of the strategy (i.e. what was discovered as a result of using the strategy)
4. Effects on student learning

IV. Action Plan

1. Effects/changes to implement strategy
2. Plans to use strategy again
3. Plans to use similiar strategies

SUBMIT TO QUALITY ASSURANCE AFTER OBTAINING SIGNATURE(S).

SPARTANBURG TECHNICAL COLLEGE, SPARTANBURG, SOUTH CAROLINA

APPENDIX H

FIELD TESTING TEACHING STRATEGIES

Div./Dept. _____ Date _____

Instructor _____ Peer Observer _____

Course _____ Dept. Head _____

Quarter _____ Dean _____

I. PLANNING

A. Description of strategy

B. Objective (written same as course guide)

II. EVALUATION

A. Key points from peer evaluation

1.
2.
3.

B. Key points from student evaluation

1.
2.
3.

C. Personal comments

1.
2.
3.

III. SUMMARY

IV. ACTION PLAN

_____

SPARTANBURG TECHNICAL COLLEGE, SPARTANBURG, SOUTH CAROLINA

APPENDIX I

COURSE GUIDE FORMAT

APPENDIX IA

EXPLANATION OF SPARTANBURG TECHNICAL COLLEGE'S COURSE GUIDE FORMAT

APPENDIX IA

SPARTANBURG TECHNICAL COLLEGE

<COURSE TITLE>

INSTRUCTIONAL GUIDE

I. COURSE SYLLABUS

II. COURSE GUIDELINES

III. TESTS AND EXAMS SAMPLE QUESTIONS

IV. REFERENCE TO DACUM TASK LIST

V. ASSESSMENT EVALUATION CHART

SPARTANBURG TECHNICAL COLLEGE, SPARTANBURG, SOUTH CAROLINA

APPENDIX IA

COURSE TITLE

Course Number:	C-L-CR
< >	<Hrs. for class and lab and credit hrs. for course>

Prerequisites: <Those course(s) that must be taken before this course so that students are adequately prepared.>

Co-Requisites: <Course(s) that should be taken the same quarter as this course.>

Course Description: <The course description will consist of a broad generic body of knowledge in a statement about the course, not to exceed five college catalog lines (should be the description in the latest STC catalog).>

Textbook(s): <Textbooks should be stated in MLA bibliographic form.>

Other Required Material, Tools, or Equipment: <This area is for any other required materials, tools, or equipment that the student is responsbile for obtaining for class.>

Course Competencies

<Course Competencies will consist of stated specific learning outcomes in behavioral and measurable terms that the student must be able to perform upon completion of the course>

APPENDIX IA

Method of Instruction:	<Strategies and techniques the instructor uses to teach the course.>
Grading Policy:	<The score equivalent to letter grades. Be sure to include any affective grading, if applicable.>
Grade Calculation Method:	<The percentage of the final grade that is determined by each evaluation instrument.>
Attendance Policy:	<STC's policy and any department policy the student needs to know.>
Class/Lab Procedures:	<Those procedures used in the class or lab that the student should be prepared to follow (e.g. safety procedures).>

APPENDIX IA

COURSE OUTLINE
<This is an outline of this document, not the course.>

I. <Should relate directly to Competency I on the Course Syllabus.>

A. <Should relate to objectives listed for Competency I on the course guide forms.>

B.

C.

D.

II. <Should relate directly to Competency II on the Course Syllabus.>

A.

B. <Should relate to objectives listed for Competency II on the course guide form.>

C.

D.

III.

A. <Relate to Competency III. See I and II.>

B.

C.

D.

IV.

A. <Relate to Competency IV. See I and II.>

B.

C.

D.

COURSE GUIDE

COURSE: <Course title>
COURSE NO.: <Number of course>
UNIT NO.: <Relates to units on syllabus>
COMPETENCY NO. <Relates to competencies on syllabus>

OBJECTIVES	STUDENT LEARNING ACTIVITIES	SPECIAL INSTRUCTIONS for INSTRUCTORS	EVALUATION METHOD	APPROX. HRS.
<The behaviors the student will be able to complete to meet the competency.>	<Assignments and activities that the students will do to complete objectives (and competency).>	<Any important information instructors should know in order to teach the objective.>	<How the obj. will be measured or evaluated.>	<Approx. hours that should be spent on teaching the objective>

APPENDIX IB

COURSE GUIDE CHECKLIST

SPARTANBURG TECHNICAL COLLEGE, SPARTANBURG, SOUTH CAROLINA

APPENDIX IB

COURSE GUIDE CHECKLIST

1) Wrote the course guide for another instructor's understanding.

2) Included the course description in the latest Spartanburg Technical College catalog.

3) Included the entire textbook citation in the following form (MLA format):

   Sumner, Mary. Computers: Concepts and Uses, 2nd edition. New York: McGraw Hill, 1985. (place of publication, publisher, copyright date)

4) Checked the learning activities to make sure all listed activities are assignments and activities that the student will do. The column reads: "The student will . . ." followed by a verb.

   EX. Read chapter on cutting and pasting in word processing manual.
   EX. Work in groups to establish a flow chart of . . .

5) Checked the special instructions to make sure all statements are written for other instructors. The column reads: "Special instruction for instructors" and might include precautions, lecture information, transparencies, location of visual aids, location of equipment, and other helpful instructor information.

6) Checked the course competencies on the first page to make sure they are exactly the same as the competencies listed at the top of each activity page.

7) Checked the course outline to make sure it is written in **NOUN** form. (Think of the outline as titles of chapters in the course packet that a reader could scan quickly to locate needed information about teaching a unit.)

8) Included sample tests, performance checklists, rater calibrated instruments, and other assessment instruments used to assess students' abilities and behaviors.

9) Included Assessment Evaluation Chart with supervisor's approval.

10) Included DACUM references.

11) Checked total number of approximate hours listed to make sure they equal the total number of class hours. State approximate hours in full hours or one-half hours - 2 hrs. or 2.5 hrs.

12) Obtained department head's and/or dean's approval on content before submitting to Quality Assurance office.

APPENDIX IC

BLANK COURSE GUIDE FORM

SPARTANBURG TECHNICAL COLLEGE, SPARTANBURG, SOUTH CAROLINA

< COURSE TITLE >

COURSE NUMBER: < > C-L-CR
< >

PREREQUISITES:

CO-REQUISITES:

COURSE DESCRIPTION:

TEXTBOOK(S):

OTHER REQUIRED
MATERIAL, TOOLS,
AND EQUIPMENT:

COURSE COMPETENCIES

UPON SATISFACTORY COMPLETION OF THIS COURSE, THE STUDENT WILL BE ABLE TO:

METHOD OF INSTRUCTION:

GRADING POLICY:

GRADE CALCULATION METHOD:

ATTENDANCE POLICY:

CLASS/LAB PROCEDURES:

COURSE OUTLINE

I.

A.

B.

C.

D.

II.

A.

B.

C.

D.

III.

A.

B.

C.

D.

IV.

A.

B.

C.

D.

COURSE GUIDE

COURSE:
COURSE NO.:
UNIT NO.:
COMPETENCY NO.

OBJECTIVES	STUDENT LEARNING ACTIVITIES	SPECIAL INSTRUCTIONS for INSTRUCTORS	EVALUATION METHOD	APPROX. HRS.

G L O S S A R Y

GLOSSARY

ASSESSMENT INSTRUMENT/METHOD - the particular implement or method upon which an evaluation will be made. For example, the assessment method for a student learning to perform a medical procedure might be observation; the assessment instrument might be a checklist. Some examples are

BOARD EXAMINATION - a standardized test approved for licensing or certification.

CASE STUDY - a prepared situation to which students respond.

ESSAY - a response in paragraph form to answer a question or address an issue.

GROUP DISCUSSION - a situation in which students informally debate about concepts or issues learned in the course.

MATCHING - two lists in which an item from one list is related to an item from the other list.

MULTIPLE CHOICE - an incomplete statement or question (called a stem) plus a list of responses, usually one correct and several incorrect (called distracters). There are numerous variations of multiple choice examinations.

OBSERVATION/QUESTIONING - an informal evaluation of students on course content.

ORAL PRESENTATION - a prepared or impromptu assignment presented orally before other members of the class.

PERFORMANCE CHECKLIST - a task list of skills on which students are evaluated based on observed performance.

PROJECT - a product-oriented assignment which students develop.

RATER CALIBRATED INSTRUMENT - a list of behavioral characteristics on which students are evaluated.

ROLE PLAY - a prepared situation that calls for students to act out roles to incorporate concepts learned.

SHORT ANSWER - a form of evaluation that may include questions, incomplete sentences, definitions, or identification items.

SIMULATION - an exercise in which students attempt to model a real-life problem situation.

TRUE/FALSE - a statement to which students may agree or disagree.

ASSESSMENT EVALUATION CHART - a chart designed to aid instructors in evaluating compatibility of objectives and corresponding assessment instruments.

ASSESSMENT METHOD DECISION TREE - a guide to developing and revising course objectives and appropriate assessment methods.

COMPETENCY - specific learning outcomes that the student must be able to perform upon completion of the course.

DACUM - an acronym for Developing A CurriculUM.

FIELD TEST - a phase in which the instructor teaches the course content using the derived outcomes assessment method as identified on the Assessment Evaluation Chart to assess student learning.

LEVEL - the degree of complexity required in a given task, objective, or competency; STC's taxonomy recognizes three levels (listed in order from simple to complex):

KNOWLEDGE LEVEL - recalling and comprehending of previously learned information.

APPLICATION LEVEL - using information in new and concrete situations or demonstrating behavior that reflects a belief or attitude.

PROBLEM SOLVING LEVEL -- adapting knowledge into a skill in order to perform various tasks and to develop new ways to perform tasks.

OBJECTIVE - the behaviors the student will demonstrate to meet the competency.

OUTCOMES ASSESSMENT - the process of evaluating student outcomes from the DACUM-derived program competencies.

STC TAXONOMY OF EDUCATIONAL DOMAINS - a variation of Bloom's Taxonomy adapted for use at Spartanburg Technical College. This taxonomy contains three domains:

AFFECTIVE DOMAIN - the demonstration of values, feelings, and attitudes toward school and work. In STC's Taxonomy, the Affective Domain contains only an Application Level.

COGNITIVE DOMAIN - the mental processing of information from the simplest levels of recalling and comprehension to the complex level of problem solving. In STC's Taxonomy, the Cognitive Domain contains a Knowledge Level, Application Level, and Problem Solving Level.

PSYCHOMOTOR DOMAIN - the combination of mental and physical activities involved in a required task. In STC's Taxonomy, the Psychomotor Domain contains an Application Level and a Problem Solving Level.

TEACHING STRATEGIES - any of numerous methods by which material may be presented to the students.